Report on the Fire-cracked rock from Port Lobh, Colonsay

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The assemblage comprised of 82 pieces recovered after sieving samples through a 2mm mesh from the following contexts.

Context	Number of pieces
3	4
5	3
7	75

Sample 1 was retrieved from a light brown uncompacted sand deposit (003) overlying a shell rich compacted midden deposit (007) from Test Pit 2. Samples 12, 13, 16, 24, 25 and 26 came from a shell rich compacted midden underlying (003). Sample 14 was recovered from a deep brown silty sand deposit (005) overlying golden sand from Test Pit 10. Sample 27 came from a medium brown sand deposit below the compacted shell midden deposit (007) from Test Pit 1.

There were 32 pieces measuring less than 10mm in length which were not analysed and, therefore, not included in the catalogue. All of these pieces were from (007); 18 and 14 from samples 25 and 24, respectively. The catalogue comprises of 50 items of which 49 have been classified as 'fire cracked rock'. Quartzite is the principal raw material found within the assemblage accounting for more than half of the 49 items (Figure 1).

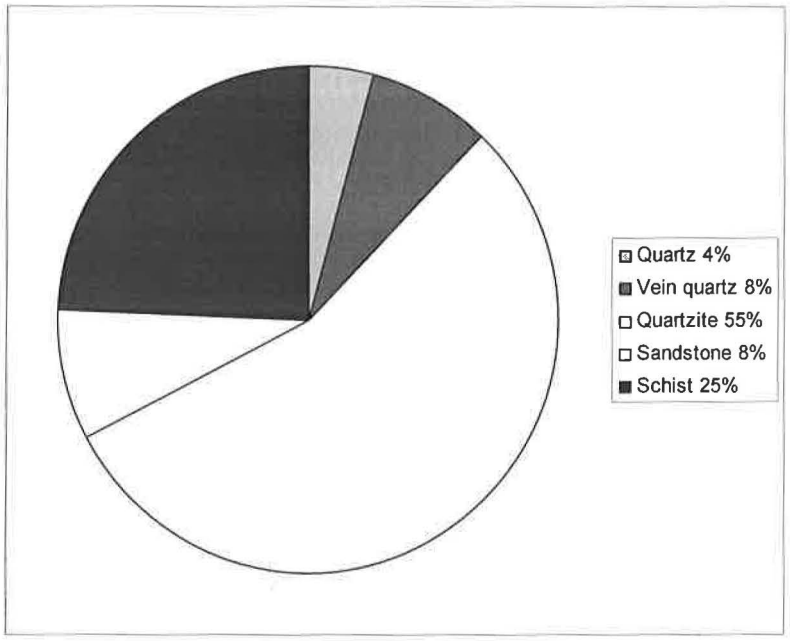

Figure 1: Percentile analysis of the fire cracked rock by raw material within the assemblage.

55.10% of the pieces were recovered from the shell rich compacted midden deposit (007) of which 52.38% was quartzite. The other raw material from (007) namely, quartz and vein quartz together accounted for 11.90% with sandstone and schist at 7.14% and 28.58%, respectively (Figure 2).

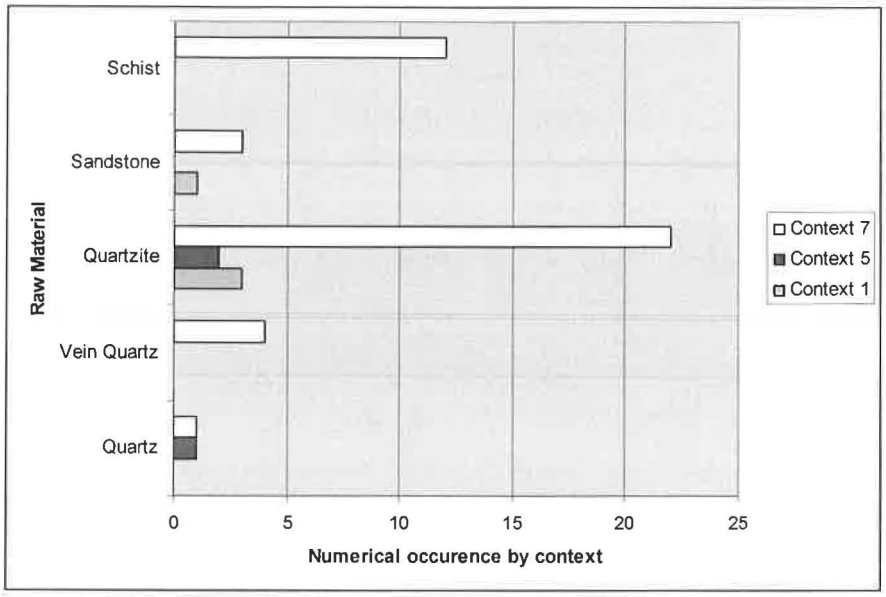

Figure 2: Analysis of the numerical occurrence of the fire cracked rock by raw material and context.

It was only possible to determine the original form of the raw material in 28.57% of the fire cracked rock in the catalogued assemblage. There were only 14 pieces were identification was possible of these 85.71% were sub-oval pebbles with the remainder flattened cobbles (14.29%). The numerical occurrence original form of the pieces is detailed by raw material at Figure 3. It is possible that the quartzite artefacts classified as 'indeterminable' were sub-oval pebbles.

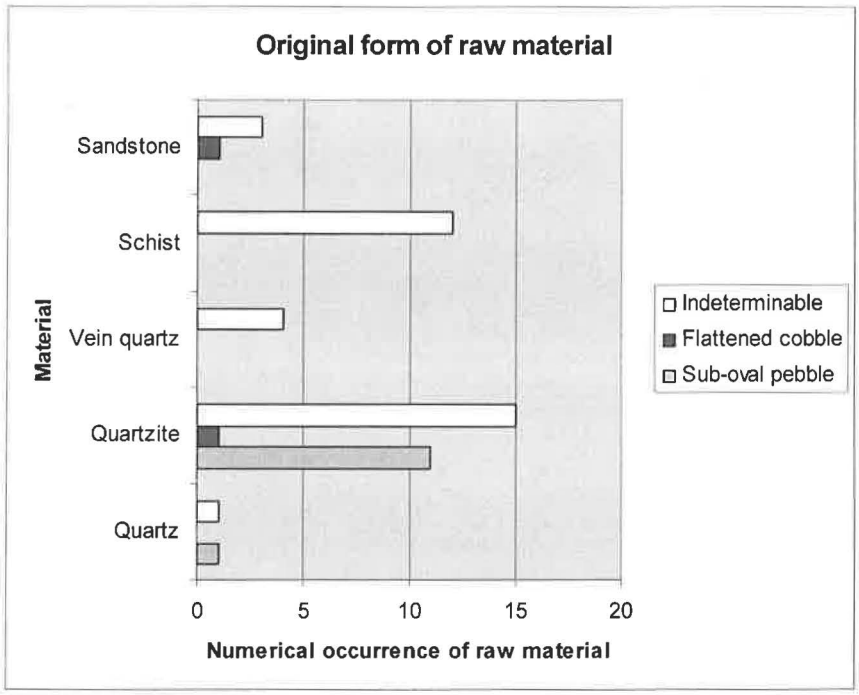

Figure 3: Analysis of the numerical occurrence of the original form of the fire cracked rock by raw material.

96.3% of the quartzite had some form of angular fracture. Only one piece of the 27 items was classified as irregular. The quartz and vein quartz combined had 'angular like' fractures in 66.66% from the sample of six artefacts. The remaining two items

have been catalogued as having an irregular fracture. 50% of the sandstone had sub-angular fractures with one piece classified as splintered and another irregular. As would be expected 83.33% of the schist was splintered with two pieces catalogued as irregular (Figure 4).

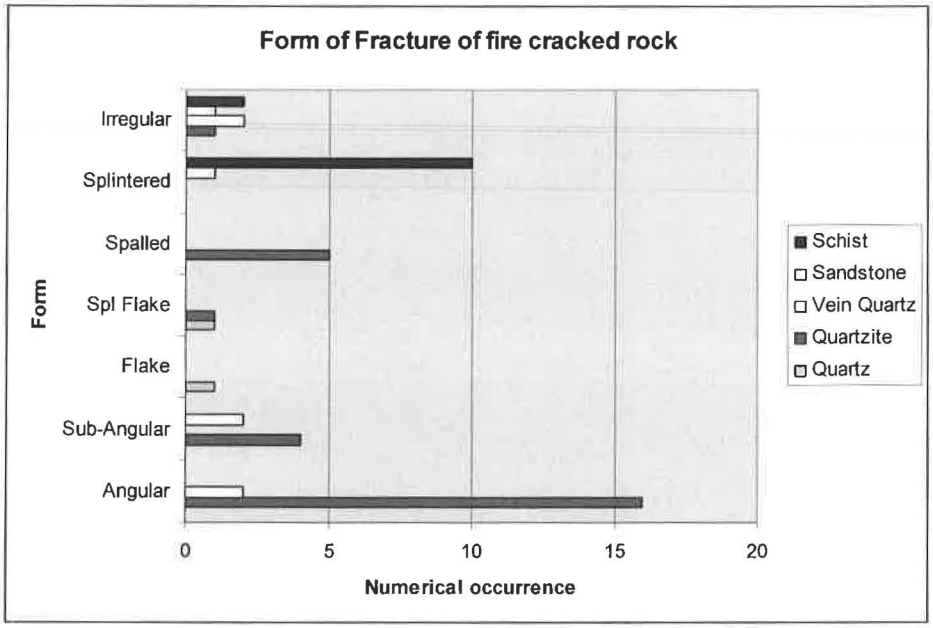

Figure 4: Analysis of the form of the fracture of the fire cracked rock by raw material and numerical occurrence.

The size of the pieces of fire cracked rock which have some form of angular fracture does not form a distinct pattern, which due to the nature of the artefacts should not be entirely surprising. There is a rough grouping with a length of between 30mm to 50mm and a breadth of 20mm to 40mm (Figure 5).

An attempt was made to refit the pieces. Item 24.3 appears to conjoin with item 24.6. The pieces do not refit.

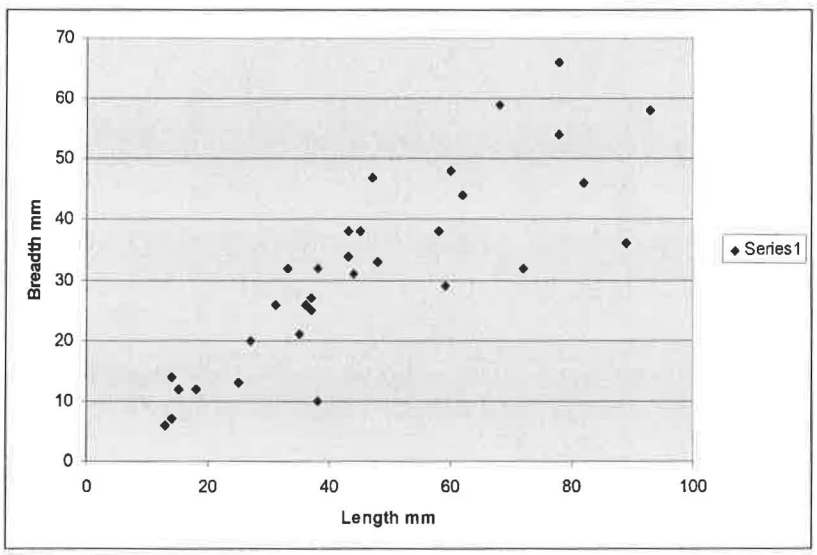

Figure 5: Scatter diagram of the length and breadth of artefacts with some form of angular fracture.

The size of the assemblage is such that it is difficult to draw any precise conclusions. The majority of the pieces were found within the compacted shell matrix (007) of the midden. They were not recovered from hearth structures although the magnetometry survey undertaken in March 2007 suggests evidence for hearths within the immediate vicinity of the Test Pits from where these artefacts were recovered in June 2006. The artefacts from Context 3 may relate to the last occupation events at the shell midden. The artefacts from Context 5 may have discarded from the midden or simply rolled down from the midden. This would assume that the context is not denuded midden material.

The preferred materials may have been quartzite, vein quartz, quartz and to a lesser extent flattened sandstone cobbles. Whilst schist accounts for 24.48% of the assemblage there are only three pieces with a length in excess of 15mm. Many of the splintered pieces of schist may have originated from only one or two pieces of raw material.

The fractures may indicate that the items were heated and then used as pot-boilers. The form of the fractures may suggest that they were not caused by heating alone. The irregular fractures may be simply that or may indicate the expedient re-use of material.

APPENDIX 1: SYSTEM OF CLASSIFICATION

The system of classification together the catalogues of the fire cracked rock from Port Lobh 1 have been adapted from *pro forma* documents drawn up by Dr. Nyree Finlay.

All pieces are described with the proximal end to the observer with the dorsal surface uppermost. The catalogues were prepared with *Excel*™.

The definitions of the terms used in the catalogues are as follows:

Sample: 1 from a light brown uncompacted sand deposit (003) overlying a shell rich compacted midden deposit (007) from Test Pit 2; 12, 13, 16, 24, 25 and 26 from a shell rich compacted midden deposit from Test Pit 2; 14 from deep brown silty sand deposit overlying golden sand (005) from Test Pit 10; 27 from a medium brown sand deposit below the compacted shell midden deposit (007) from Test Pit 1.

Material: pg (pea gravel); q (quartz); qv (vein quartz); qz (quartzite); s (sandstone); sch (schist). Note: all material has been classified by macroscopic identification.

Condition: fcr (fire cracked rock); n (natural).

Original form of material (OS): esop (elongated sub-oval pebble); fc (flattened cobble; i (indeterminable); lsp (lozenge shaped pebble; sop (sub-oval pebble).

Form of fracture: a (angular); esa (elongated sub-angular); f (form similar to struck flake); i (irregular); sa (sub-angular); sf (form similar to splintered flake); sp (form similar to spalled removal); spl (splintered). Note: none of the pieces were worked.

Measurements: L (length); B (breadth); Th (thickness). All measurement are in millimetres.

Site	Cat #	Sample	Context	Sieve	Mat	Cond	OS	FS	L	B	Th	Notes
06PL1	1.1	1	1	2mm	qz	fcr	sop	a	43	38	23	
06PL1	1.2	1	1	2mm	qz	fcr	i	a	38	32	19	
06PL1	1.3	1	1	2mm	qz	fcr	i	sa	31	26	24	
06PL1	1.4	1	1	2mm	s	fcr	i	i	29	24	14	
06PL1	12.1	12	7	2mm	qz	fcr	sop	i	70	43	26	split pebble then burnt
06PL1	12.2	12	7	2mm	qz	fcr	i	a	47	47	35	
06PL1	12.3	12	7	2mm	qz	fcr	sop	esa	37	27	15	
06PL1	12.4	12	7	2mm	qz	fcr	i	a	33	32	17	
06PL1	12.5	12	7	2mm	qz	fcr	sop	sf	37	25	8	
06PL1	12.6	12	7	2mm	qz	fcr	sop	sp	25	13	9	
06PL1	13.1	13	7	2mm	s	fcr	fc	sa	82	46	27	
06PL1	13.2	13	7	2mm	q	fcr	sop	f	45	38	14	
06PL1	13.3	13	7	2mm	qz	fcr	i	a	35	21	11	
06PL1	14.1	14	5	2mm	qz	fcr	fc	a	62	44	20	
06PL1	14.2	14	5	2mm	q	fcr	i	sf	44	31	14	
06PL1	14.3	14	5	2mm	qz	fcr	i	sp	27	20	15	
06PL1	16.1	16	7	2mm	qz	fcr	sop	a	93	58	38	
06PL1	16.2	16	7	2mm	qv	fcr	i	a	78	66	49	
06PL1	16.3	16	7	2mm	qz	fcr	esop	sa	59	29	10	
06PL1	24.1	24	7	2mm	qz	fcr	i	a	68	59	53	shallow concave surface
06PL1	24.2	24	7	2mm	qz	fcr	i	a	72	32	29	
06PL1	24.3	24	7	2mm	qv	fcr	i	a	58	38	26	
06PL1	24.4	24	7	2mm	qz	fcr	i	a	48	33	33	
06PL1	24.5	24	7	2mm	qz	fcr	sop	a	36	26	14	
06PL1	24.6	24	7	2mm	qv	fcr	i	i	14	12	11	conjoins with 24.3
06PL1	25.1	25	7	2mm	sch	fcr	i	spl	33	22	6	
06PL1	25.2	25	7	2mm	s	fcr	i	sa	15	12	6	
06PL1	25.3	25	7	2mm	s	fcr	i	spl	18	10	3	
06PL1	25.4	25	7	2mm	qz	fcr	sop	sa	14	14	6	
06PL1	25.5	25	7	2mm	sch	fcr	i	spl	16	8	2	
06PL1	25.6	25	7	2mm	sch	fcr	i	spl	10	8	2	
06PL1	25.7	25	7	2mm	sch	fcr	i	spl	10	8	2	
06PL1	25.8	25	7	2mm	sch	fcr	i	spl	10	8	2	
06PL1	25.9	25	7	2mm	sch	fcr	i	i	11	6	3	
06PL1	26.1	26	7	2mm	qz	fcr	i	a	89	36	19	dark pink burn stain
06PL1	26.2	26	7	2mm	qz	fcr	sop	a	43	34	19	
06PL1	26.3	26	7	2mm	qz	fcr	i	a	18	12	7	
06PL1	26.4	26	7	2mm	sch	fcr	i	spl	20	9	2	
06PL1	26.5	26	7	2mm	sch	fcr	i	spl	15	14	2	flat face rounded edge
06PL1	26.6	26	7	2mm	sch	fcr	i	spl	14	8	3	
06PL1	26.7	26	7	2mm	sch	fcr	i	spl	13	10	1	
06PL1	26.8	26	7	2mm	sch	fcr	i	i	10	7	3	
06PL1	26.9	26	7	2mm	qv	fcr	i	i	11	8	3	
06PL1	26.10	26	7	2mm	pg	n	esop		12	6	3	complete
06PL1	26.11	26	7	2mm	qz	fcr	i	sp	14	7	6	
06PL1	26.12	26	7	2mm	sch	fcr	i	spl	13	7	1	
06PL1	26.13	26	7	2mm	qz	fcr	i	sp	13	6	3	
06PL1	27.1	27	7	2mm	qz	fcr	lsp	sa	78	54	30	rounded
06PL1	27.2	27	7	2mm	qz	fcr	i	a	60	48	30	dark pink burn stain
06PL1	27.3	27	7	2mm	qz	fcr	i	sp	38	10	8	